Title (en)

Optical crystal and terahertz wave generation device and method

Title (de)

Optischer Kristall, Terahertz-Wellenerzeugungsvorrichtung und Verfahren

Title (fr)

Cristal optique, dispositif de génération d'ondes térahertz et procédé

Publication

EP 2482127 B1 20160413 (EN)

Application

EP 12152324 A 20120124

Priority

• JP 2011019775 A 20110201
• JP 2011290285 A 20111229

Abstract (en)

[origin: EP2482127A2] An optical crystal (10) includes a first non-linear optical crystal (10a) that generates terahertz waves corresponding to a difference frequency component in incident light with two different wavelengths by a difference frequency generation, and a second non-linear optical crystal (10b) that generates terahertz waves corresponding to a difference frequency component in incident light with two different wavelengths by a difference frequency generation, the second non-linear optical crystal (10b) being different in material from the first non-linear optical crystal (10a), and the first non-linear optical crystal and the second non-linear optical crystal being disposed in contact or close together.

IPC 8 full level

G02F 1/35 (2006.01); G02F 1/361 (2006.01)

CPC (source: EP US)

G02F 1/3501 (2013.01 - EP US); G02F 1/3507 (2021.01 - EP US); G02F 1/3534 (2013.01 - EP US); G02F 2201/16 (2013.01 - EP US); G02F 2203/13 (2013.01 - EP US)

Citation (examination)

• US 2010195675 A1 20100805 - MOLONEY JEROME V [US], et al
• YAMASHITA T ET AL: "Frequency-agile 1-20 THz-wave generation using DAST crystal", LASERS AND ELECTRO-OPTICS - PACIFIC RIM, 2007. CLEO/PACIFIC RIM 2007. CONFERENCE ON, IEEE, PI, 1 August 2007 (2007-08-01), pages 1 - 2, XP031166248, ISBN: 978-1-4244-1173-3
• TANIUCHI T ET AL: "CONTINUOUSLY TUNABLE THZ-WAVE GENERATION FROM GAP CRYSTAL BY DIFFERENCE FREQUENCY MIXING WITH A DUAL-WAVELENGTH KTP-OPO", THZ CONFERENCE. INTERNATIONAL CONFERENCE ON TERAHERTZ ELECTRONICS, X, XX, 28 September 2000 (2000-09-28), pages 225 - 228, XP009083983

Cited by

CN108470986A

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

EP 2482127 A2 20120801; **EP 2482127 A3 20121107**; **EP 2482127 B1 20160413**; CN 102629065 A 20120808; CN 102629065 B 20160803; JP 2012177896 A 20120913; JP 5909089 B2 20160426; US 2012193554 A1 20120802; US 8445875 B2 20130521

DOCDB simple family (application)

EP 12152324 A 20120124; CN 201210021833 A 20120131; JP 2011290285 A 20111229; US 201213355289 A 20120120